

13(2. (Amended) The method of claim 1, wherein the electromagnetic brake having at least one inductor which includes two packs of several conductors in a vertical direction, the method further comprising: applying, for each conductor, the following relation:

$$\text{grad}V = -i (\omega - vk) A - \rho j,$$

where ω represents the A.C. excitation pulse of the sliding field, v represents the metal speed, k represents the wave number of the inductive sliding magnetic field, A represents the vector potential, ρ represents the resistivity of the metal, j represents the density of the excitation current of the conductor, and V represents the voltage across the inductor.

3. (Twice amended) The method of claim 1, wherein the speed measurement is used to servocontrol the excitation of the inductors into a predetermined value.

4. (Amended) A method for regulating the continuous casting speed of a molten metal in an ingot mould equipped with a sliding field electromagnetic brake including several inductors, the method comprising:

supplying each of the several inductors with electrical power from at least one constant power source individually, wherein one of current and voltage of the constant power source's output is held constant; and

controlling the other of the current and voltage of the constant power source with a measurement of the other of the current and voltage in each inductor.

5. (Amended) A continuous casting installation of the type using a sliding field electromagnetic brake to control the flow of a liquid metal provided by two ports of a nozzle, comprising:

at least one inductor included in the electromagnetic brake;

each inductor powered by an individual supply circuit; and the installation includes means for regulating at least one of supply voltage and current of each inductor independent of other inductors to maintain the liquid metal flow speeds balanced between the two ports.

6. (Amended) The installation of claim 5, wherein each supply circuit of each inductor includes its own means for regulating the electromagnetic excitation power of this inductor.

7. (Amended) The installation of claim 5, further comprising a central station for controlling the supply circuits of different inductors to regulate the liquid metal flow speed.

8. (Amended) The method of claim 2, wherein the speed measured is used to servocontrol the excitation of the inductors into a predetermined value.